

those of the spring-form of *P. bianor* of Amami Island, but less broadcast than in the spring-form of *P. b. dehaani* of Honshu, and scattered more widely than in *P. hoppo* and *P. p. hermosanus*; the relative density of those whitish scales smaller than in *P. b. dehaani* and *P. hoppo* but similar to that of *P. p. hermosanus*; the individual whitish scale larger than that of *P. b. dehaani* or *P. hoppo* and similar in size to that of *P. p. hermosanus*; lastly, the outer margin of the underside of the hindwing very broadly white.

Male Genitalia (plate 2): general features extremely similar to those of *P. p. hermosanus*, particularly in the shape of socius and in the shape and position of the harpe on the inside of the valva; the only clear distinction being the superuncus, which is rather longer than that of *P. p. hermosanus*.

Holotype: male, taken on March 20th, 1965, at the summit of Mt. Santo Tomas (2,258m), northern Luzon, the Philippines. The holotype specimen has been donated to the National Science Museum, Tokyo.

“Chikae” 由来記

磐瀬太郎¹⁾

How *Papilio chikae* was found and named.

By TARO IWASE¹⁾, F. R. E. S.

大形アゲハチョウの新種が発見されることは、近年は極めて稀である。レコードを丹念に調べたわけではないが、ヨーロッパや北アメリカでは近年全くなかったことで、アフリカでも旧ベルギー領コンゴのキヴ地方の *Graphium martensi* DUFRANE, 1946年を最後としている。私共の身近かでは1936年台湾のフトオアゲハ *Agehana maraho* SHIRAKI et SONAN があるが、1961年に騒がれたタカネアゲハ(モクセイアゲハ) *Iphiclides chungianus* MURAYAMA も *I. alebion* の亜種であるという。

我々は台湾の蝶相がシナ大陸の大きな影響下にあることはミドリシジミ群の分布などによって強く印象づけられている。これに反してフィリピンの蝶相のことは余りよく知られず、何となしに南方とのつながりが強く、台湾、ましてやシナ大陸との間には深い断絶があるように感じていた。これは生物地理に暗い私個人の感じだけではなかったと思う。

南方の生物地理といえはすぐ思い出すワラス・ライン (WALLACE's line) は当初バリ島とロンボック島の間を通るとされており、後日更に延長されてボルネオとセレベスの間を通過して、フィリピン群島のミンダナオ島の南方を過ぎて太平洋に出るものとされたが、更にその後フィリピンの Bureau of Science の植物学者 E. D. MERRILL などの研究によって、パラワン島とミンドロ島の間を北上し、台湾とルソン島の間から太平洋に出るものと訂正された。その後の学者によって多少の異説はあるが、台湾とフィリピンの間に深い断絶があるという印象はさけ難かった。

しかるに数年前上野の国立科学博物館所蔵標本中に発見された1個のルソン島産と思われるアゲハチョウ標本は、黒沢良彦博士と私との協同のセンサクによって *Papilio benguetana* JOICEY & TALBOT であることがわかり、これがナミアゲハ *P. xuthus* の亜種か、きわめて近い別種かという見解に行きついた。この時私と黒沢博士と

1) 文京区湯島2丁目30の10, 30-10, Yushima-2, Bunkyo, Tokyo.

で書いた解説の別刷は、1963年6月、丁度ヒマラヤ蝶蛾調査隊員として羽田を出発する五十嵐邁氏に間に合い、氏は東支那海を飛ぶ機上で、他日ルソン島への調査行を決意されたという。

機会は意外に早く、1965年3月、ベンゲット行は計画された。しかし、出発間ぎわに決った同氏のアメリカ出張で、氏は涙をのんで直接の調査を断念し、ヒマラヤ隊に同行した若手の原田基弘氏が単独派遣された。季節がはずれていたため、原田氏は狙ったベンゲットアゲハは漸く1頭とらえたのみで、目的とする同種の幼虫は発見にいたらなかったが、思いもかけぬ副産物として1頭のカラスアゲハをもたらした。

カラスアゲハ亜属 *Achillides* は黒沢博士によれば“裏面が濃色で、縁紋の赤い *bianor-paris* 群と（裏面が）淡色で褐色を帯び、縁紋が汚黄褐色の *palinurus-ulysses* 群に2大別され、前者はヒマラヤからインドシナ半島を中心とした北方地方に、後者はモルッカ島を中心とした（南方）地方に分布する。”フィリッピンには *Palinurus* 1種が知られるのみであったが、今回原田君がもたらしたカラスアゲハの新種は、明らかに *bianor-Paris* 群即ち北方の群で、このことは、ベンゲットアゲハと同じサント・トーマス山頂でとれたことと共にルソン北部の山岳にシナ大陸系のアゲハが2種類もいることを示していて、特筆に価する。しかし、台湾とフィリッピンの間に越えがたい溝があると思ひこんでいたのは私の勉強不足であって、F. E. ZEUNER は1943年、キシタアゲハ、トリバネアゲハ類の分類、分布、系統と、Australasia の島々の地史との関係を論じた論文²⁾中にキシタアゲハ *aeacus* 群（キシタアゲハ *aeacus*、コウトウキシタアゲハ *magellanus*、フィリッピンキシタ *rhadamantus*）は鮮新时期 Pliocene の後半、フィリッピン群島が海上に出現した後、台湾を経て南シナから受けとった動物相の一部で、*magellanus* は Pliocene 期おそく、*rhadamantus* は更新世 Pleistocene 始めに *aeacus* から別れて到来したものとしている。

これを考えれば、シナ大陸や台湾系のナミアゲハ、カラスアゲハが北部ルソンでとれることも当然である。

白水隆博士も、1947年“松虫”処載の西部支那系要素の重要性に関する論文中に、次の如くのべておられる。「フィリッピンには比較的新しい時代（台湾が支那大陸より分離してから後）において台湾（或は琉球）を通じて侵入したと考えられる西部支那系の顕著な一群がある。例えばルソンの山地に見られる *Papilio xuthus* アゲハ、*Kaniska canace* ルリタテハ等で、これは台湾、琉球がフィリッピンと地理的關係を持った時代にバタアン諸島を経て侵入したものである事は相当の確信を持って言う事が出来る」

新種の学名について五十嵐氏に意見を求められたが、私は、父上の海軍殉職後永い間手一つで五十嵐氏を育てた、慈愛と理解の深い母堂ちか様に捧げることが強く勧めた。しかし氏は最初採集者原田氏の功に酬いたい気持が強く、最後まで躊躇して居られたが、結局同じように父上を早くなくされた高倉忠博氏からの説得があったので、漸く同意された次第である。原田氏には今後とも協力者として多くの機会があることを私は確信している。

(1965年6月16日記)

In recent years, new discoveries of larger Papilionid species are very scarce indeed. No such discovery has been reported either from the European Continent or North America since many years ago. The latest record I can think of is that of *Graphium martensi* DUFRANE in 1946 from Kivu Province, then Belgian Congo. In the Far East, a most remarkable species, *Agehana maraho* SHIRAKI et SONAN was discovered in Formosa in 1936. However, the case, again from Formosa, of *Iphiclides chungianus* MURAYAMA, which was claimed to be a good species in 1961, eventually turned out to be the discovery of a new subspecies of *Iphiclides alebion* after more detailed studies were made.

We have been able to analyse the butterfly fauna of Formosa in some detail, and strongly feel

- 2) “Studies in the Systematics of *Troides* HÜBNER and its allies; Distribution & phylogeny in relation to the Geological History of the Australasian Archipelago” by F. E. ZEUNER
Trans. Zool. Soc. Vol. XXV, Part. 3, 1943.

that it is closely related to that of China Mainland, as evidenced in the distribution of the Theclini group (Lycaenidae) in the island. On the contrary, not very much has been known about the lepidopterological fauna of the Philippine Islands. We had almost been under the impression, until recently, that the fauna of the Philippines would be comparable to that of further south rather than to the Formosan, much less Mainland Chinese, fauna. I myself used to hold the same opinion with good reason, in spite of my limited knowledge of biogeography of the area.

Biogeographically, the Archipelago of the Philippines and some of Indonesian islands remind one of an important zoological demarcation line proposed by A. R. WALLACE. When first suggested, WALLACE's Line started between Bali and Lombok Islands. At a later date it was extended to pass between Borneo and Celebes and end in the Pacific to the southeast of Mindanao. However, more elaborate research by Dr. E. D. MERRILL of the Bureau of Science of the Philippines (a botanist) and other scholars revealed that WALLACE's Line should run between Palawan and Mindoro Islands, and then end in the Pacific between Luzon and Formosa (Bashi Channel). Since then there have been divergent views held by other scholars on minor details of WALLACE's Line, but even these assertions have not effaced altogether our long-standing impression that Formosa and the Philippines belong to two widely separate regions regarding the butterfly fauna.

Several years ago, however, a *Papilio* specimen was unexpectedly found among a small unnoticed collection of butterflies, presumably of Luzon, which had somehow come into possession of the National Science Museum, Tôkyô. Efforts were subsequently made to identify it by Dr. YOSHIHIKO KUROSAWA of the Museum and myself, and it turned out to be *Papilio benguetana* JOICEY et TALBOT, through the kind assistance of Mr. T. G. HOWARTH of the British Museum (Natural History). We then arrived at the conclusion that the butterfly must be either a subspecies of *P. xuthus* or a species very closely related to it. A short article on that subject was written by us, and a reprint of it managed to reach Mr. SUGURU IGARASHI who was on the point of leaving Tôkyô Airport for the Himalayas as one of the Lepidopterological Expedition members in June 1963. Incidentally, he is said to have determined to visit Luzon at his earliest convenience, reading the article aboard the aeroplane flying over the East China Sea.

In March 1965, Mr. IGARASHI planned to visit Benguet Mountains. Unfortunately, his attempt had to be suspended because of an important business trip to the United States. His plan for a Philippine visit was then taken over by Mr. MOTOHIRO HARADA, who had also participated in the Lepidopterological Expedition to the Himalayas.

As far as the coveted butterfly *P. benguetana* was concerned, his energetic quest was not very fruitful. Probably the best season had been over, and he took only one male specimen. His efforts to find larvae of the butterfly ended in vain. In compensation, as it were, he was to capture an unfamiliar *Achillides*-butterfly.

According to Dr. KUROSAWA, the subgenus *Achillides* of Papilionidae can be divided into two large groups—one, called the *bianor-paris* group, with dark undersides and red marginal markings, and the other, *palinurus-ulysses* group having paler and brownish undersides with yellow-ochreous marginal markings. The species belonging to the former are distributed in the northern part of the domain of *Achillides*, with their headquarters in the Himalayas and the Indochina Peninsula. The southern part is inhabited by the latter group, centring around Moluccas.

It had thus far been known that a species, *P. palinurus*, represented the subgenus in the Philippines. However, the specimen taken by Mr. HARADA apparently belonged to the northern, or *bianor-paris* group in the light of the afore-mentioned group distinction. The fact that a northern type of *Achillides* was found along with *P. benguetana* on the summit of Mt. Santo Tomas, northern Luzon, is worthy of special mention, because these two examples suggest the existence in the butterfly fauna of the northern mountains of Luzon of two Chinese Mainland elements.

But it was when I read an article, which was found to have an important bearing upon this subject, that I discarded the impression that Formosa and the Philippines would be faunistically wide apart. Dr. F. E. ZEUNER says in his "Studies in the Systematics of *Troides* HÜBNER and its allies; Distribution & Phylogeny in relation to the Geological History of the Australasian Archipelago"³⁾ that the *aeacus*-group (comprising *aeacus*, *magellanus* and *rhadamanthus*), together with other species, reached the Philippines from South China by way of Formosa after the formation of the Philippine Islands in the latter period of Pliocene. He considers that *magellanus* arrived towards the end of Pliocene, and that *rhadamanthus*, as a branch derived from *aeacus*, came to the Philippines at the beginning of Pleistocene. In view of the present distribution of the group, it is no wonder that species allied to the Mainland Chinese, or for that matter Formosan, butterflies such as *P. xuthus*, *P. bianor*, *P. paris* etc, also occur in northern Luzon.

Elsewhere, Dr. TAKASHI SHIRŌZU refers to this question in his paper on the significance of the so-called "West-Chinese Elements" in the Far Eastern fauna (Matsumushi, 1947), as follows: "There is strong evidence of the influx of West-Chinese elements into the fauna of the Philippines, which is supposed to have occurred at a comparatively recent period (not earlier than the isolation of Formosa from the Mainland of China), either via Formosa or the Ryūkyū Islands. For example, *Papilio xuthus* and *Kaniska canace* are distributed in the mountains of Luzon. Undoubtedly, they had made their way from Formosa and/or the Ryūkyūs via the Batan Islands when the Philippines were in closer geographical relations with the former than they are to-day."

Finally, a few words about the specific name of the new species, which is the title of this essay. When I was consulted by Mr. IGARASHI on the nomenclature of the butterfly, I urged him to dedicate the remarkable discovery to his mother, Mrs. CHIKA IGARASHI. I understand that she has brought him up with the utmost affection and understanding since she was bereaved of her husband, a naval officer who died at his post of duty in late 'twenties. At first, however, he seemed to be more inclined to favour the name of Mr. HARADA who actually captured the specimen. Mr. IGARASHI's hesitation about the choice of a specific name was only put an end to by earnest exhortations of Mr. TADAHIRO TAKAKURA, who happened to be brought up in similar family circumstances. To conclude, I wish Mr. HARADA all good luck in his future entomological activities in co-operation with Mr. IGARASHI.

(Tōkyō, June 16, 1965.)

3) F. E. ZEUNER : Trans. Zool. Soc. Vol. XXV, Part 3, 1943.